

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A computer program product tangibly embodied in a computer-readable storage medium, [[.]]the product comprising instructions operable to cause a data processing apparatus to execute a method for navigating user interface elements on a display screen[[;]], the method comprising:

at application run time, grouping the user interface elements into groups according to characters contained in text labels associated with the user interface elements, being arranged in order into user interface element groups having assigned group identifier characters; and the user interface elements indicating, on the display screen, an a user interface element currently having focus to receive user input; the method comprising:

detecting a user navigation input comprising one of a forward user navigation input or a backward user navigation input, the forward user navigation input comprises comprising a forward modifier key press combined with a key press of a first group identifier character, and the backward user navigation input comprises comprising a backward modifier key press combined with a key press of a second group identifier character;

identifying a selected group of user interface elements associated with the first or second group identifier character key press by comparing the group identifier key press to the characters contained in the text labels associated with the user interface elements; and

shifting input focus to a user interface element in the selected identified group based on the user navigation input,

wherein, when the user navigation input is detected:

determining a current group that contains the user interface element currently having input focus, and

determining a target group that has a corresponding text label containing characters matching the group identifier key press corresponds to the group identifier key press;

wherein when the user navigation input is the forward user navigation input:

input focus is shifted in the forward direction to an a next user interface element next in order in the current group having a text label containing characters matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to a first user interface element in the target group if the current group is not the same as the target group, and

wherein when the user navigation input is the backward user navigation input:

input focus is shifted in the reverse direction to an a previous user interface element previous in order in the current group having an associated text label matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to an user interface element last in order in the target group if the current group is not the same as the target group.

2. (Canceled)

3. (Currently amended) The product of claim 1, wherein the selected group of user interface elements is identified when have associated text labels, and wherein the text labels associated with the user interface elements contain associated with the first or second group identifier character are user interface elements having an associated text label with a first character that matches characters matching the first or second group identifier key press character.

4. (Currently amended) The product of claim 1 3, wherein a the first character matches a the group identifier character key press if both are the same character regardless of character case.

5. (Currently amended) The product of claim 4 3, wherein a the first character matches a the group identifier character key press if both are the same character in the same case.

6. (Currently amended) The product of claim 1, wherein the user interface elements have associated text labels, the product further comprising instructions to: group the user interface elements into groups are grouped based on the first character characters of the associated text labels label of the user interface elements at application run time.

7. (Currently amended) The product of claim 6, wherein ~~group instructions to group the user interface elements into groups based on the first character of the associated text label comprise instructions to:~~

~~group only the user interface elements in currently displayed on a current screen of the application are grouped into groups based on the first character of the associated text label.~~

8. (Currently amended) The product of claim 1, wherein:

the forward user navigation input is a combination of one or more forward modifier keys and the ~~first group identifier character key press~~; and

the backward user navigation input is a combination of one or more backward modifier keys and the ~~second group identifier character key press~~.

9. (Currently amended) A computer program product tangibly embodied in a computer-readable storage medium,[[,]] the product comprising instructions operable to cause a data processing apparatus to execute a method for navigating user interface elements on a display screen[[;]], the method comprising:

at application run time, grouping the user interface elements into groups according to characters contained in text labels associated with the user interface elements, being arranged in order into user interface element groups having assigned group identifier characters; and the user interface elements indicating, on the display screen, an a user interface element currently having focus to receive user input; the method comprising:

detecting a sequence of one or more user navigation inputs, each user navigation input comprising one of a forward user navigation input or a backward user navigation input, the forward user navigation input comprises comprising a forward modifier key press combined with a key press of a first group identifier character, and the backward user navigation input comprises comprising a backward modifier key press combined with a key press of a second group identifier character;

generating a navigation string from the sequence of ~~one or more group identifier characters for the one or more user navigation inputs; and~~

identifying a group of user interface elements by comparing the navigation string to the characters contained in the text labels associated with the user interface elements; and

shifting input focus to a user interface element in the identified group based on identified by the navigation string;

wherein, when the user navigation input is detected:

determining a current group that contains the user interface element currently having input focus, and

determining a target group that has a corresponding text label containing characters matching corresponds to the group identifier key press;

wherein when the user navigation input is the forward user navigation input:

input focus is shifted in the forward direction to an a next user interface element next in order in the current group having a corresponding text label containing characters matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to a first user interface element in the target group if the current group is not the same as the target group, and

wherein when the user navigation input is the backward user navigation input:

input focus is shifted in the reverse direction to an a previous user interface element previous in order in the current group having a text label containing characters matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to an user interface element last in order in the target group if the current group is not the same as the target group.

10. (Previously presented) The product of claim 9, wherein instructions to detect a sequence of one or more user navigation inputs comprise instructions to:

detect a sequence of forward user navigation inputs, the sequence having a first user navigation input and a last user navigation input;

initialize the navigation string when the first user navigation input is detected;

start a time out interval with each forward user navigation input; and

determine the last user navigation input as the input after which no forward user navigation inputs are detected within the time out interval.

11. (Previously presented) The product of claim 9, wherein instructions to detect a sequence of one or more user navigation inputs comprise instructions to:

detect a sequence of backward user navigation inputs, the sequence having a first user navigation input and a last user navigation input;

initialize the navigation string when the first user navigation input is detected; start a time out interval with each backward user navigation input; and determine the last user navigation input as the input after which no backward user navigation inputs are detected within the time out interval.

12. (Currently amended) The product of claim 9, wherein the user interface elements have an order, and instructions to shift input focus to a the user interface element comprise instructions to:

shift input focus in the forward direction to a next user interface element in the current group order having a text label starting with the same characters as the characters in the navigation string, if the user navigation input is the forward user navigation input; and or

shift input focus in the reverse direction to a previous user interface element in the current group order having a text label starting with the same characters as the characters in the navigation string, if the user navigation input is the backward user navigation input .

13. (Currently amended) A computer program product tangibly embodied in a computer-readable storage medium, the product comprising instructions operable to cause a data processing apparatus to execute a method for navigating user interface elements on a display screen[[;]], method comprising:

at application run time, grouping the user interface elements into groups according to characters contained in text labels associated with the user interface

~~elements, being arranged in order into user interface element groups having assigned group identifier characters; and the user interface elements indicating, on the display screen, an a user interface element currently having focus to receive user input; the method comprising:~~

detecting an ensemble of sequential user activation inputs, each user activation input comprising a character, thereby detecting a sequence of characters, each user activation input comprising one of a forward user activation input or a backward user activation input, the forward user activation input ~~comprises~~ comprising a forward activation modifier key press combined with a key press of a ~~first~~ group identifier character and the backward user activation input ~~comprises~~ comprising a backward activation modifier key press combined with a key press of a ~~second~~ group identifier character key;

identifying a ~~matching activation group of user interface elements element by finding an activation user interface element having a label matching comparing the sequence of characters to the group identifier key press;~~ and

performing an action associated with the ~~matching activation a user interface element in the identified group;~~

wherein, when the user activation input is detected:

determining a current group that contains the user interface element currently having input focus, and

determining a target group that has a corresponding text label containing characters matching corresponds to the group identifier key press;

wherein when the user activation input is the forward user activation input:

input focus is shifted in the forward direction to an a next user interface element ~~next in order~~ in the current group having an associated text label with characters matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to a first user interface element in the target group if the current group is not the same as the target group, and

wherein when the user activation input is the backward user activation input:

input focus is shifted in the reverse direction to an a previous user interface element ~~previous in order~~ in the current group having an associated text label with characters matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to an user interface element last in order in the target group if the current group is not the same as the target group.

14. (Currently amended) The product of claim 13, wherein instructions to detect an ensemble comprise instructions to:

detect a sequence of one or more characters that uniquely identifies ~~an activation~~ a user interface element.

15. (Previously presented) The product of claim 14, wherein the sequence of one or more characters is a sequence of identical group identifier characters.

16. (Previously presented) The product of claim 13, wherein instructions to detect an ensemble comprise instructions to:

detect one or more sequential user activation inputs entered by a user within a time threshold.

17. (Previously presented) The product of claim 13, wherein:
the pressing and releasing of an activation modifier key delimits the user activation inputs in the ensemble.

18. (Currently amended) A computer implemented method for navigating user interface elements on a display screen, the method comprising:

at application run time, grouping the user interface elements being arranged in order into user interface element groups having assigned group identifier according to characters contained in text labels associated with the user interface elements; and the user interface elements indicating, on the display screen, an a user interface element currently having focus to receive user input; the method comprising:

detecting a user navigation input comprising one of a forward user navigation input or a backward user navigation input, the forward user navigation input comprises comprising a forward modifier key press combined with a key press of a first group identifier character, and the backward user navigation input comprises comprising a backward modifier key press combined with a key press of a second group identifier character;

identifying a selected group of user interface elements associated with the ~~first or second group identifier character~~ key press by comparing the group identifier key press to the characters contained in the text labels associated with the user interface elements; and

shifting input focus to a user interface element in the selected identified group based on the user navigation input;

wherein, when the user navigation input is detected:

determining a current group that contains the user interface element currently having input focus, and

determining a target group that has an associated text label containing characters matching ~~corresponds to~~ the group identifier key press;

wherein when the user navigation input is the forward user navigation input:

input focus is shifted in the forward direction to ~~an~~ a next user interface element ~~next in order~~ in the current group having a text label containing characters matching the group identifier key press if the current group is the same as the target group, and ~~or~~

input focus is shifted to a first user interface element in the target group if the current group is not the same as the target group, and

wherein when the user navigation input is the backward user navigation input:

input focus is shifted in the reverse direction to ~~an~~ a previous user interface element ~~previous in order~~ in the current group having a text label containing characters matching the group identifier key press if the current group is the same as the target group, and ~~or~~

input focus is shifted to ~~an a~~ a user interface element last in order in the target group if the current group is not the same as the target group.

19. (Canceled)

20. (Currently amended) The method of claim 18, wherein the identified group of user interface elements is identified when have associated text labels, and wherein the text labels associated with the user interface elements associated with the group identifier character are user interface elements having an associated text label with a contain first character that matches matching the group identifier key press character.

21. (Currently amended) The method of claim 18, wherein the user interface elements ~~have associated text labels, the method further comprising:~~

~~grouping the user interface elements into groups are grouped based on the first character of the characters contained in the associated text label labels of the user interface elements at application run time.~~

22. (Currently amended) The method of claim 18, wherein:

the forward user navigation input is a combination of one or more forward modifier keys and the ~~first~~ group identifier character key press; and

the backward user navigation input is a combination of one or more backward modifier keys and the ~~second~~ group identifier character key press.

23. (Currently amended) A computer implemented method, for a software application having user interface elements on a display screen, the method comprising:
at application run time, grouping the user interface elements being arranged in order into user interface element groups having assigned group identifier according to characters contained in text labels associated with the user interface elements; and the interface elements indicating, on the display screen, an a user interface element currently having focus to receive user input; the method comprising:

detecting a sequence of one or more user navigation inputs, each user navigation input comprising one of a forward user navigation input or a backward user navigation input, the forward user navigation input comprises comprising a forward modifier key press combined with a key press of a first group identifier character and the backward user navigation input comprises comprising a backward modifier key press combined with a key press of a second group identifier character;

generating a navigation string from the sequence of one or more group identifier characters for the one or more user navigation inputs; and

identifying a group of user interface elements by comparing the navigation string to the characters contained in the text labels associated with the user interface elements;

shifting input focus to a user interface element in the identified group based on identified by the navigation string;

wherein, when the user navigation input is detected:

determining a current group that contains the user interface element currently having input focus, and

determining a target group that has an associated text label containing characters that correspond corresponds to the group identifier key press;

wherein when the user navigation input is the forward user navigation input:
input focus is shifted in the forward direction to an a next user interface element next in order in the current group having a text label containing characters matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to a first user interface element in the target group if the current group is not the same as the target group, and

wherein when the user navigation input is the backward user navigation input:
input focus is shifted in the reverse direction to an a previous user interface element previous in order in the current group having a text label containing characters matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to an a user interface element last in order in the target group if the current group is not the same as the target group.

24. (Previously presented) The method of claim 23, wherein detecting a sequence of one or more user navigation inputs comprises:

detecting a sequence of forward user navigation inputs, the sequence having a first user navigation input and a last user navigation input;

initializing the navigation string when the first user navigation input is detected;
starting a time out interval with each forward user navigation input; and

determining the last user navigation input as the input after which no forward user navigation inputs are detected within the time out interval.

25. (Previously presented) The method of claim 23, wherein detecting a sequence of one or more user navigation inputs comprises:

detecting a sequence of backward user navigation inputs, the sequence having a first user navigation input and a last user navigation input;

initializing the navigation string when the first user navigation input is detected;

starting a time out interval with each backward navigation key press; and

determining the last navigation key press as the key press after which no backward navigation key presses are detected within the time out interval.

26. (Currently amended) The method of claim 23, wherein the user interface elements have an order, and shifting input focus ~~to a user interface element~~ comprises:

if the user navigation input is the forward user navigation input, shifting input focus in the forward direction to a next ~~in-order~~ user interface element in the current group having a text label starting with the same characters as the characters in the navigation string; and

if the user navigation input is the backward user navigation input, shifting input focus in the reverse direction to a previous ~~in-order~~ user interface element in the current group having a text label starting with the same characters as the characters in the navigation string.

27. (Currently amended) A computer implemented method providing activation keys for user interface elements on a display screen, the method comprising:

at application run time, grouping the user interface elements being arranged in order into user interface element groups having assigned group identifier according to characters contained in text labels associated with the user interface elements; and the user interface elements indicating, on the display screen, an a user interface element currently having focus to receive user input; the method comprising:

detecting an ensemble of sequential user activation inputs, each user activation input comprising a character, thereby detecting a sequence of characters, each user activation input comprising one of a forward user activation input or a backward user activation input, the forward user activation input comprises comprising a forward activation modifier key press combined with a key press of a first group identifier character and the backward user activation input comprises comprising a backward activation modifier key press combined with a key press of a second group identifier character;

identifying a matching activation group of user interface element elements by finding an activation user interface element having a label matching comparing the characters contained in the text labels associated with the user interface elements to the sequence of characters; and

performing an action associated with the matching activation a user interface element in the identified group;

wherein, when the user activation input is detected:

determining a current group that contains the user interface element currently having input focus, and

determining a target group that has an associated text label containing characters matching corresponds to the group identifier key press;

wherein when the user activation input is the forward user activation input:

input focus is shifted in the forward direction to an a next user interface element next in order in the current group having a text label containing characters matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to a first user interface element in the target group if the current group is not the same as the target group, and

wherein when the user activation input is the backward user activation input:

input focus is shifted in the reverse direction to an a previous user interface element previous in order in the current group having a text label containing characters matching the group identifier key press if the current group is the same as the target group, and or

input focus is shifted to an user interface element last in order in the target group if the current group is not the same as the target group.

28. (Currently amended) The method of claim 27, wherein detecting an ensemble comprises:

detecting a sequence of one or more characters that uniquely identifies an activation a user interface element.

29. (Previously presented) The method of claim 28, wherein the sequence of one or more characters is a sequence of identical group identifier characters.

30. (Previously presented) The method of claim 27, wherein detecting an ensemble comprises:

detecting one or more sequential user activation inputs entered by a user within a time threshold.

31. (Previously presented) The method of claim 27, wherein:
the pressing and releasing of an activation modifier key delimits the user activation inputs in the ensemble.

32. (Previously presented) The product of claim 1, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.

33. (Previously presented) The product of claim 9, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.

34. (Previously presented) The product of claim 13, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.

35. (Previously presented) The method of claim 18, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.

36. (Previously presented) The method of claim 23, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.

37. (Previously presented) The method of claim 27, wherein, if there is no current group, the target group is deemed to be different from the current group and input focus is shifted to a first user interface element in the target group.